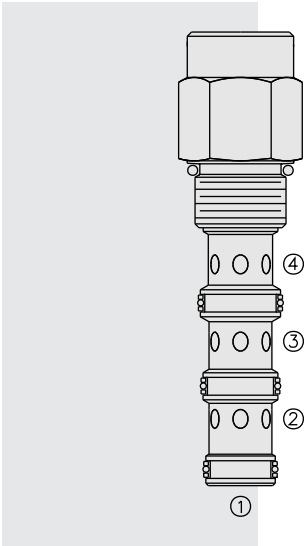


DIRECTIONAL VALVES

PD12-41 Piloted 3-Way Spool, Internal Vent



DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve for three-way circuits requiring remote pilot actuation.

OPERATION

In neutral (unpiloted), the **PD12-41** allows flow from ③ to ④. ② is blocked.

On remote pilot signal at ①, the valve shifts to open from ③ to ②, while blocking flow to ④.

Since ④ is common to the spring chamber, pressure on ④ will directly (1:1) affect the pilot pressure required, and must always be added to the bias spring value.

Note: Consult factory for applications where bi-directional flow is required when the valve is in the normal or spring-offset position.

FEATURES

- Hardened spool and cage for long life.
- Cost effective cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Proof Pressure: 420 bar (6090 psi)

Flow: See Performance Chart

Internal Leakage: 246 cc/minute (15 cu. in./minute) max. at 207 bar (3000 psi)

Pilot Pressure Required Using 7.6 bar (110 psi) Spring:

To Spool Crossover: 7.6 bar (110 psi)

To Full Spool Shift: 9.1 bar (132 psi)

Oil Volume Required to Full Shift: 1.32 cc (0.08 cu. in.)

Temperature: -40 to 120°C with standard Buna seals

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

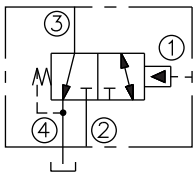
Cavity: VC12-4; See page 9.112.1

Cavity Tool: CT12-4XX; See page 8.600.1

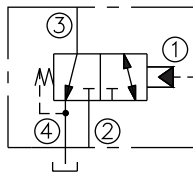
Seal Kit: SK12-4X-MMM; See page 8.650.1

SYMBOLS

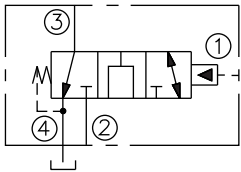
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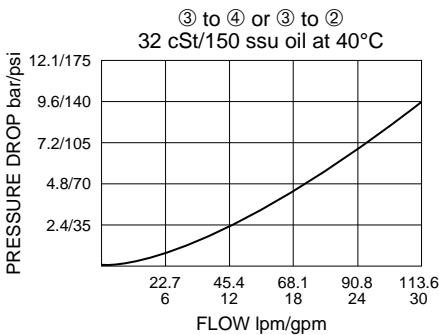
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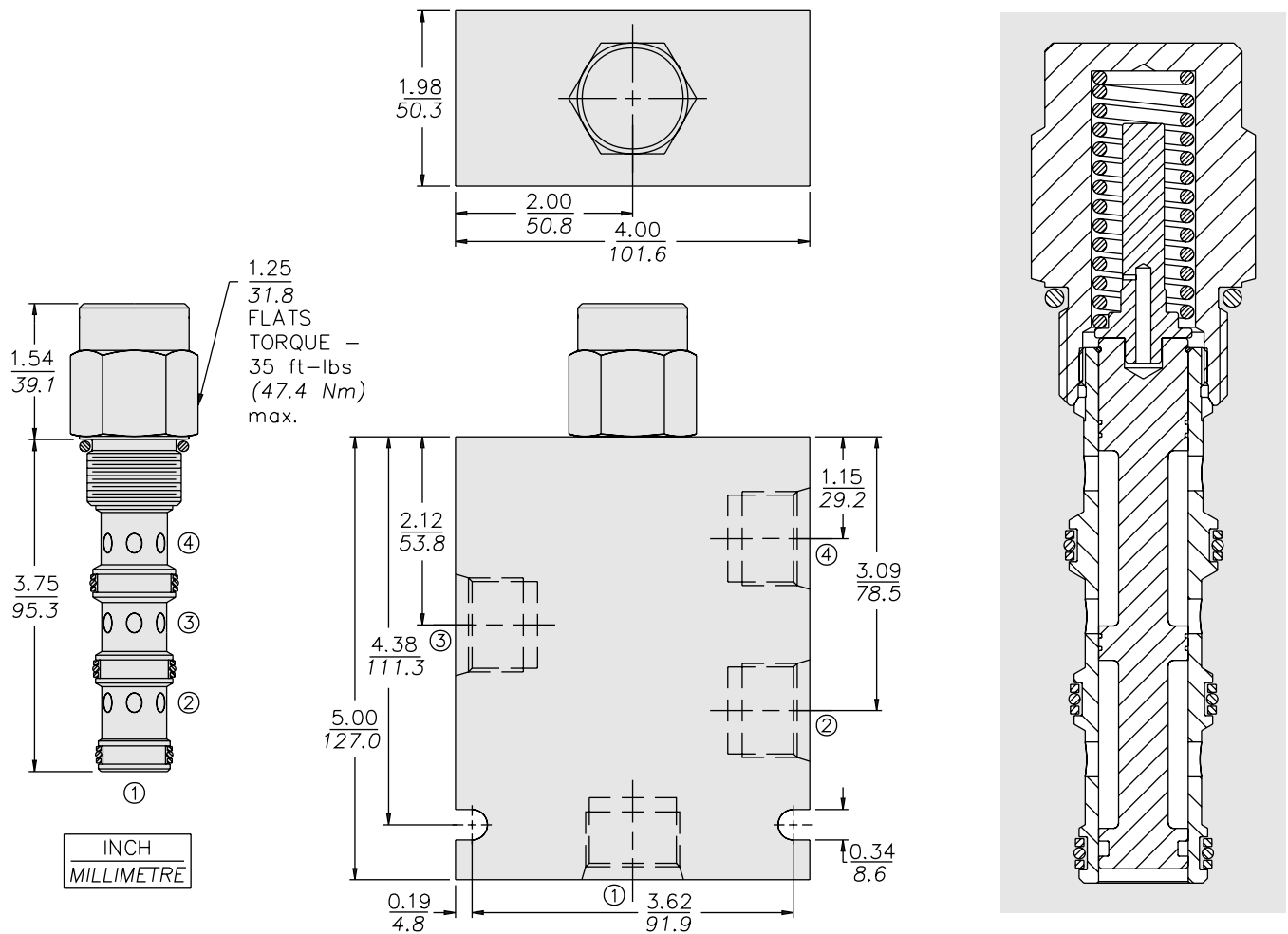
OPEN TRANSITION:



PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.28 kg. (0.61 lbs.)
Steel with hardened work surfaces;
Zinc-plated exposed surfaces.
Buna N O-rings and polyester
elastomer back-ups standard.

Standard Ported Body: Weight:
1.5 kg. (3.3 lbs.); Anodized high-
strength 6061 T6 aluminum alloy,
rated to 207 bar (3000 psi). Ductile
iron bodies available; dimensions
may differ. See page 8.012.1

TO ORDER

PD12-41 - - -		
Option		Bias Spring[†]
None (Blank)		60 4.1 bar (60 psi)
Open Transition N		110 7.6 bar (110 psi)
		170 11.7 bar (170 psi)
		Optional bias springs considered on OEM request.
		[†] Note: 110 psi bias spring is the minimum required for use with sealed spool.
Porting		Seals
Cartridge Only 0		N Buna N (Std.)
SAE 10 10T		NS Buna N with Sealed Spool
SAE 12 12T		V Fluorocarbon
		VS Fluorocarbon with Sealed Spool